Quality Assurance Management Plan

for the State of California's Surface Water Ambient Monitoring Program:

"SWAMP"

prepared under contract by:

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for the:

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December 2002 (1st version)

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Section A1. Title and Approval Sheet; Citation for QAMP; Preface/Acknowledgements

Program Title	State of California's Surface Water Ambient Monitoring Program ("SWAMP")
Lead Organization	California State Water Resources Control Board (SWRCB) Division of Water Quality, TMDL Section, Assessment and TMDL Support Unit 1001 "I" St, 15th Floor Sacramento, CA 95814
Primary Contact	Val Connor, SWAMP Program Manager, (916) 341-5573
Effective Date	This Quality Assurance Management Plan (QAMP) is effective from July 1, 2002 through June 30, 2004, unless otherwise revised, approved, and distributed accordingly at an earlier date.
Citation for QAMP	Puckett, M. 2002. Quality Assurance Management Plan for the State of California's Surface Water Ambient Monitoring Program ("SWAMP"). California Department of Fish and Game, Monterey, CA. Prepared for the State Water Resources Control Board, Sacramento, CA. 145 pages plus Appendices.

QAMP Preface and Acknowledgements

The preparation of this QAMP was funded by an Interagency Agreement from the SWRCB to DFG for the SWAMP Program (SWRCB Contract No.00-111-250-1). First and foremost, much gratitude is in order for the patience and support of all of the State and Regional Board staff for enduring and participating in the lengthy process that was necessary in order to produce this First Version of the SWAMP QAMP. Gathering the information in this QAMP involved literally each and every organization and individual mentioned in this document, and their many contributions are greatly appreciated. The information contained in many of the Appendices has been provided directly by SWAMP Program participants, and their contributions to this effort are also acknowledged (their authorship on those documents is duly noted on the cover pages of respective Appendices). Mark Stephenson, Dave Crane, Rusty Fairey, Bettina Sohst, Autumn Bonnema, Gary Ichikawa, Jon Goetzl, Marco Sigala, Cassandra Roberts, Mark Pranger, John Hunt, Brian Anderson, Bryn Phillips, and Sean Mundell in particular have spent a great deal of time assisting with much of the behind-the-scenes editing and reviewing of technical content. Much of the technical content was derived from concepts (or text directly utilized, as noted) provided in other QAPP's for programs of a similar nature, including the Sacramento River

Watershed Program, the San Francisco Bay Regional Monitoring Program (through the San Francisco Estuary Institute), the Southern California Bight Projects (through the Southern California Coastal Waters Research Program), the Western EMAP Project, the Puget Sound Ambient Monitoring Program, the USGS National Ambient Water Quality Assessment (NAWQA) program, and many others.

Information and text from the QAPP of the San Francisco Bay Regional Monitoring Program (developed through the San Francisco Estuary Institute) was used extensively in some sections of this document, and we want to make sure this is duly noted and credited.

The most significant contribution to the format and content of this QAMP, and of many of the Appendices, came from the State of Texas' Surface Water Quality Monitoring Program, with the direct assistance of Ms. Christine Kolbe. Ms. Kolbe, on behalf of the State of Texas Natural Resources Conservation Commission, provided numerous recently updated electronic files and documents that Texas has been using for their surface water ambient monitoring program, which has been in place since the late 1960's. Ms. Kolbe's extensive assistance is hereby duly acknowledged and very much appreciated.

Participation by all of the Regional Board and State Board SWAMP staff, as well as other SWAMP contract Agency and University laboratory staff, in the numerous technical workshops which were held for SWAMP planning purposes during 2001/2002 is also greatly appreciated, as the ideas generated and conclusions reached (when conclusions were able to be reached) at these workshops helped to provide much of the "backbone" for the criteria and recommendations put forth in this document. **"Standardize where possible, document otherwise"** has become one of our primary tenets in SWAMP for these "startup years" as a result of these workshops. This program is still in its "infancy", and as such, there will be programmatic and technical evolution as SWAMP advances with the progress of each year's work.

As explained in more detail further in this QAMP (Section A5), California Assembly Bill (AB) 982 (Water Code Section 13192; Statutes of 1999) required the SWRCB to assess and report on all State of California water quality monitoring programs, and to prepare a proposal for a comprehensive surface water quality monitoring program. The resulting report proposing SWAMP was submitted to the Legislature in November 2000. The passage of, and implementation of the requirements of, AB-982 ultimately provided for the administrative, political, financial, and technical means to create the SWAMP Program within the SWRCB. This was possible due to support from the California Legislature in Fiscal Year 2000-2001 provided in the Governor's Water Quality Initiative, which provided the authority and budget within the SWRCB for the formation of SWAMP.

The SWAMP Program is "in its infancy" currently, having only just begun to conduct field monitoring activities during the 2001-2002 fiscal year. We are in an evolving process of trying to standardize (to the extent possible) goals, objectives, designs, and methods, as appropriate,

under the existing staff and resource restrictions, and under the existing programmatic structure. Four existing SWRCB surface water monitoring programs have been included as part of SWAMP: these are the Toxic Substance Monitoring Program; the State Mussel Watch Program; the Toxicity Testing Program; and the Coastal Fish Contamination Program.

Extensive planning and preliminary research activities were conducted from 1999 through 2002 in order to try to provide the best guidance and framework possible to create an effective surface water quality ambient monitoring program for all of California's surface waters. Guidance documents (Work Plan preparation guidance documents) were prepared by the SWRCB in order to try to provide a framework within which RWQCB's could develop region-specific SWAMP projects; an external scientific panel was convened to review the overall SWAMP program guidance prepared by the SWRCB; technical workshops were conducted on sample collection and field data measurement methodology issues, on laboratory analytical methodology issues and quality assurance/quality control issues, on biological assessment and toxicological issues, and on data management issues; and dozens of regular meetings of the SWAMP Roundtable have been held over the last several years, with participation from key SWAMP staff at the SWRCB, all nine RWQCB's, DFG/University Laboratory SWAMP staff (contracted by the SWRCB), and others, to plan for and review SWAMP program structure, administration, contractual processing, fiscal management, data management, scientific/technical issues, etc. Resolution to many of these same issues is still evolving from the discussions held at these workshops and SWAMP Roundtable meetings. One of the primary focuses of the Roundtable's 2002 meetings has been the development of this QAPP, which is critical to ensure the high quality of data. Field-monitoring activities in accordance with SWAMP began in FY 2001-02 and focused on Regional priorities. RWQCB SWAMP workplans for FY 2002-03 have been completed, in which staff identified the water bodies to be monitored in the fiscal year. The external scientific panel mentioned above is the Scientific Planning and Review Committee (SPARC), whose purpose is to review study design, approaches, indicators, and other relevant topics.

Effectively then, this QAMP is deemed as a first step at putting into writing the initial plans for conducting and managing the quality assurance/quality control (QA/QC) aspects of the SWAMP Program, and beginning the process to attempt to standardize methods and strategies to the extent possible, practical, and applicable throughout the state. This QAMP also represents an attempt to merge, consolidate, and incorporate scientific thought, programmatic structures and ideas, and existing methodological information resulting from having conducted thorough research and discussions with numerous other major surface water quality monitoring programs throughout California and the nation. This includes reviewing, consolidating, and indirectly or directly incorporating information from QAPP's, protocols, methods manuals, and other literature from such projects/programs as previously mentioned.

Approvals:

Val Connor, SWRCB, SWAMP Program Manager
Assessment and TMDL Support Unit, TMDL Section, Division of Water Quality

_____ Date _____

William Ray, SWRCB, Quality Assurance Officer for all SWRCB Programs,
Division of Water Quality

_____ Date _____

Regional Water Quality Control Board--North Coast Region (RWQCB 1)--QA Officer or designee

_____ Date _____

Regional Water Quality Control Board--San Francisco Bay Region (RWQCB 2)--QA Officer or designee

_____ Date _____

Regional Water Quality Control Board--Central Coast Region (RWQCB 3)--QA Officer or designee

_____ Date _____

Regional Water Quality Control Board--Los Angeles Region (RWQCB 4)--QA Officer or designee

_____ Date _____

Regional Water Quality Control Board--Central Valley Region (RWQCB 5)--QA Officer or designee

_____ Date _____

Regional Water Quality Control Board--Lahontan Region (RWQCB 6)--QA Officer or designee

_____ Date _____

Regional Water Quality Control Board--Colorado River Basin Region (RWQCB 7)--QA Officer or designee

_____ Date _____

Regional Water Quality Control Board--Santa Ana Region (RWQCB 8)--QA Officer or designee

_____ Date _____

Regional Water Quality Control Board--San Diego (RWQCB 9)--QA Officer or designee

_____ Date _____

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Appendix F: SWAMP Toxicity Testing SOP's

Appendix G: SWAMP Field and Laboratory QAPP's (including SOP's) for Biological Assessment and Benthic Infaunal Community Assessment

Appendix H: Recommended Minimum Health and Safety Guidance for SWAMP Field Activities

Appendix I: SWAMP Recommended Lab/Field QA Evaluation Guidance

Appendix J: INTERIM SWAMP Information Management System Plan

APPENDICES

NOTE: individual appendices are available from the SWRCB SWAMP Program staff in electronic file, or are available for download from the official SWAMP Program SWRCB website, and are not provided as a part of this QAMP main body document.

FIGURES

TABLES

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